

## Appraisal of Surgical Treatment for pT2 Gallbladder Carcinomas

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**Abstract.** This retrospective study was designed to appraise the surgical procedures for pT2 gallbladder (GB) carcinomas. Twenty patients with pT2 GB carcinomas underwent surgical resection. Hepatectomy of segments 4b and 5 was performed in 19 patients, and an extended right hepatic lobectomy was performed in 1. The extrahepatic bile duct was preserved in 8 patients in whom the disease was limited to the GB fundus and/or body. Regional lymphadenectomy was performed in 18 patients. A separate radical second operation was performed in 8 patients after cholecystectomy. Final pathological staging was stage IB in 15 patients, IIB in 4, and IV in 1. Overall 5-year survival rate in those 20 patients was 77% without operative deaths. The 5-year survival rate in 5 patients with nodal metastasis and in 8 patients without extrahepatic biliary resection was 80% and 100%, respectively. A separate radical second operation in 8 patients yielded 75% survival after 5 years. Perineural invasion as a prognostic determinant was closely associated with tumor extending to the neck or the cystic duct. Partial hepatectomy, usually with extrahepatic biliary resection and regional lymphadenectomy, was appropriate as a standard radical operation for pT2 GB carcinoma, but preservation of extrahepatic bile duct is advocated for disease limited to the GB fundus and/or body. Radical second operation enhanced the chance for cure in patients with pT2 GB carcinoma.

Carcinoma of the gallbladder (GB) readily spreads to the adjacent tissues, such as the liver, bile duct, and connective tissue and lymph nodes in the hepatoduodenal ligament [1–7]. These unfavorable tumor characteristics are associated with an extremely poor prognosis after surgery [3, 6, 7]. Although there are patients with advanced GB carcinomas for whom aggressive surgical approaches might bring about improved prognosis [4, 8], most long-term survivors are patients whose early carcinomas are confined to the mucosa or muscularis and are found incidentally [7, 9, 10]. Thus, the only chance for GB carcinoma cure is achieved by early detection and complete surgical resection. Gallbladder carcinoma invading perimuscular connective tissue without histological extension be-

yond the serosa or into the liver has been defined as a pT2 tumor according to the TNM classification of the International Union Against Cancer (UICC) [11]. According to the General Rules of the Japanese Society of Biliary Surgery [12], GB carcinomas confined to the mucosa or muscle layer have been defined as the early stage of the disease, and surgical resection for patients with these tumors has yielded a survival benefit [9, 10]. Cancer invading the subserosal layer of the GB frequently accompanies invasion to the liver and bile duct as advanced GB carcinoma [12], but pT2 GB carcinoma may not necessarily include the advanced disease. The preoperative diagnosis of pT2 GB carcinoma is not easy, irrespective of the advances in medical imaging, and it is usually discovered during histological examination after a simple cholecystectomy [9].

An improvement of the outcome after curative resection for GB carcinoma may be dependent on the selection of appropriate surgical treatment for pT2 GB carcinoma. The most pertinent question is whether any particular surgical strategy should be recommended for patients with pT2 GB carcinoma. This retrospective study was designed to further investigate the appropriate surgical procedures for patients with pT2 GB carcinoma according to the TNM classification of UICC [11] and to establish the prognostic determinants in those patients.

### Patients and Methods

Between March 1, 1978 and March 31, 2001, 53 patients with GB carcinoma underwent surgical resection at our institute. The TNM (tumor, nodes, metastases) staging system based on the criteria of the UICC (Table 1) [11] was used, and the extent of tumor spread was described according to the pTNM (pathological classification) staging system. There were 5, 20, 6, and 22 patients with pT1, pT2, pT3, and pT4 disease, respectively. Therefore, 20 patients were included in this study, 15 women and 5 men, whose ages ranged from 40 to 80 years (mean: 63.5 years). Their main symptoms were upper abdominal pain or right hypochondralgia in 11 patients. Gallbladder carcinomas in 4 patients were accompanied by an anomalous pancreaticobiliary ductal junction. In addition to cholecystectomy, hepatic resection of segments 4b (the caudal portion of segment 4) and 5 [13] was performed in 19 patients, and an extended right he-

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**Table 1.** UICC stage grouping for gallbladder carcinoma based on pathological classification [11].

Stage	pT	pN	pM
0	pTis	pN0	pM0
IA	pT1	pN0	pM0
IB	pT2	pN0	pM0
IIA	pT3	pN0	pM0
IIB	pT1, pT2, pT3	pN1	pM0
III	pT4	Any pN	pM0
IV	Any pT	Any pN	pM1

pT: primary tumor; pTX: primary tumors cannot be assessed; pT0: no evidence of primary tumor; pTis: carcinoma in situ; pT1: tumor invades lamina propria or muscle layer (T1a: tumor invades lamina propria; T1b: tumor invades muscle layer); pT2: tumor invades perimuscular connective tissue, no extension beyond serosa or into liver; pT3: tumor perforates serosa (visceral peritoneum) and/or directly invades the liver and/or one other adjacent organ or structure, e.g., stomach, duodenum, colon, pancreas, omentum, extrahepatic bile ducts; pT4: tumor invades main portal vein or hepatic artery, or invades two or more extrahepatic organs or structures; pN: regional lymph nodes; pNX: regional lymph nodes cannot be assessed; pN0: no regional lymph node metastasis; pN1: regional lymph node metastasis. Regional lymph nodes are the cystic duct node and the pericholedochal, hilar, peripancreatic (head only), periduodenal, periportal, celiac, and superior mesenteric lymph nodes. pM: Distant metastasis; pMX: presence of distant metastasis cannot be assessed; pM0: no distant metastasis; pM1: distant metastasis.

patric lobectomy was performed in 1. The suprapancreatic segment of the extrahepatic bile duct was resected in 12 patients but was preserved in 8 patients with GB carcinoma limited to the GB fundus and/or body. En bloc dissection of the lymph nodes in the hepatoduodenal ligament, nodes along the common hepatic artery, the right celiac nodes, and the posterior pancreatoduodenal nodes was performed in 18 patients and paraaortic lymphadenectomy was added in 17 patients. Systematic lymphadenectomy was impossible for one patient who had severe intraabdominal adhesions after cholecystectomy prior to radical second operation and in one patient with a pericholedochal portal vein as an anatomical anomaly.

In our series of pT2 GB carcinomas, 8 patients underwent radical second operations to remove any residual tumor in the GB bed, the cystic duct stump, and the regional lymph nodes. This second operation was accomplished within 1 month in 5 patients, within 2 months in 2, and within 5 months in 1 (Table 2). Prior to operation, the presence of polypoid lesions in the GB was found in these 8 patients by abdominal ultrasonography at a medical check-up. Excision of the port sites at the time of radical second operation was not performed in 2 patients undergoing laparoscopic cholecystectomy (LC) because GB perforation did not occur during LC.

Histological examination of the resected specimens was performed by one of the authors (S.B.), a pathologist. The surgical specimens were reviewed to determine histologic grade, tumor location, depth of cancer invasion, lymph node metastasis, presence of venous invasion, lymphatic infiltration and perineural invasion, and the clearance of surgical margins. The depth of the lesion was determined from multiple sections of the entire lesion. Two serial 3- $\mu$ m sections were prepared from each lymph node for hematoxylin and eosin (H&E) staining and immunohistochemical staining with antibody against cytokeratin. The latter analysis was performed using mouse monoclonal antibodies specific for human cytokeratin 8 and 18 (35 $\beta$ H11 and DC10, DAKO JAPAN Co. Ltd., Kyoto, Japan). The tissue sections were deparaffinized and dehydrated, then incubated with 35 $\beta$ H11 and DC10 at a 1:5 dilution,

followed by second antibodies against mouse immunoglobulin (Histofine Simple Stain PO (MULTI) Nichirei, Tokyo, Japan). Immunostaining was performed using the avidin-biotin-peroxidase complex method [14]. The immunostained sections were then evaluated blindly by two observers (S.S. and S.B.). Nodal metastasis detected by ordinary H&E staining was defined as overt lymph node metastasis, and micrometastasis was defined as the presence of tumor cells missed on histological examination with H&E staining but detected by cytokeratin-specific immunostaining alone [14]. The judgment of pathologic lymph node metastasis (pN) was performed based on the evaluation of overt lymph node metastasis.

For each variable, the survival, estimated by the Kaplan-Meier method, was checked for statistical significance by the log-rank test (Statview 4.5, Abacus Concepts, Berkeley, CA). The relationship between each clinicopathological factor was assessed using the  $\chi^2$  test with Fisher's exact method. Values of  $p < 0.05$  were considered significant. The clinical records and follow-up data could be obtained for all patients.

## Results

Regarding the location of the GB carcinomas, the main site was limited to the fundus and/or the body in 12 patients, the neck to cystic duct in 4, and the neck alone in 1. The other 3 patients had lesions extending along entire GB from the fundus to the neck. Cancer infiltration into the GB wall was histologically shown in the subserosal layer in 19 patients and in the muscularis in 1 patient. The latter case had a cancer nest within the connective tissue of the GB bed in a resected specimen from the radical second operation. Overt lymph node metastases were observed in 4 (22%) of 18 patients with lymphadenectomy: cystic duct node in 3, pericholedochal node in 1, and hilar node in 2 (pN1). Only one additional patient had a micrometastasis in a periportal lymph node (pN1). No patients had direct invasion of the liver, the common bile duct, or other adjacent organs. The presence of liver metastasis (M1) was histologically demonstrated in one patient. According to the TNM staging system based on the criteria of the UICC [11], the pathological classification was stage IB in 15 patients, stage IIB in 4, and IV in 1.

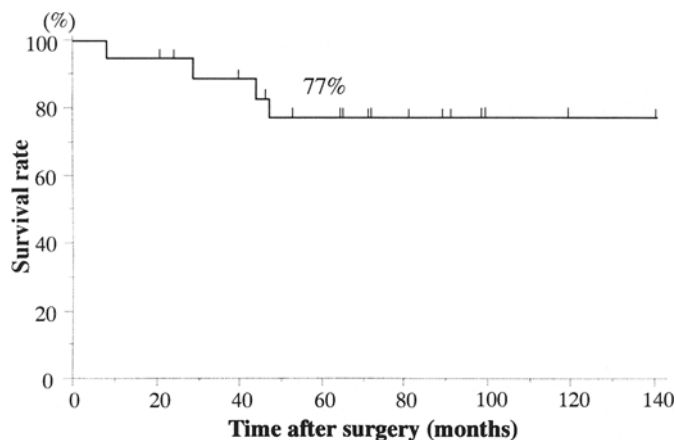
Postoperative complications developed in three patients (16%) including two anastomotic leakages, and one lymphorrhea, but there were no operative deaths. Serum total bilirubin, aspartate aminotransferase (AST), and alanine aminotransferase (ALT) levels at postoperative day 1 significantly increased to  $1.4 \pm 0.9$  mg/dl,  $183 \pm 76$  IU/l,  $171 \pm 65$  IU/l, respectively, when compared with levels before hepatectomy. These biochemical data on liver function declined to normal ranges by day 10 after surgery. The mean hospital stay after surgery was  $27 \pm 8$  days in 8 patients with radical second operations and  $24 \pm 5$  days in the other 12 patients. Radical second operation did not cause prolongation of the hospital stay.

The overall 5-year survival in 20 patients with pT2 GB carcinoma was 77%, with a median survival period of 64 months (Fig. 1), whereas four patients died of recurrent disease including peritoneal carcinomatosis in one, local recurrence in two, and liver metastasis in one. The results of univariate analysis of the various clinicopathological factors of pT2 GB carcinoma are shown in Table 3. Eight patients who underwent radical second operations had a median survival of 81 months with a 75% 5-year survival after the second surgery. Postoperative survival was not significantly different between patients undergoing simultaneous resection with chole-

**Table 2.** Outcome after radical second operation for pT2 gallbladder carcinoma.

Patient no. (age, gender)	pN	M	Stage	Initial operation	Interval between first and second operations (months)	Carcinoma in re-resected specimen	Outcome
1. (40, F)	0	0	I B	OC	1	ND	149 months NED
2. (80, F)	0	0	I B	OC	2	ND	100 months NED
3. (72, F)	1	0	II B	LC	1	ND	98 months NED
4. (65, F)	0	0	I B	OC	5	Detected: L	48 months DOD
5. (80, F)	0	0	I B	OC	1	Detected: CD	72 months NED
6. (49, M)	0	0	I B	OC	2	ND	64 months NED
7. (41, M)	0	0	I B	LC	1	ND	43 months DOD
8. (69, F)	0	0	I B	OC	2	Detected: C	89 months NED

OC: open cholecystectomy; LC: laparoscopic cholecystectomy; ND: not detected; L: liver; CD: cystic duct; C: connective tissue around gallbladder bed; NED: no evidence of disease; DOD: dead of disease.

**Fig. 1.** Overall survival of patients with pT2 gallbladder carcinoma after surgery.

cystectomy and those undergoing radical second operations. In the single variables examined, resection of the extrahepatic bile duct, location of GB carcinoma, pN classification, overt nodal metastasis and/or micrometastasis, and microscopic venous invasion did not have statistical significance as prognostic determinants in patients with pT2 GB carcinoma. Only the histological differentiation grade and the presence of perineural invasion were significantly associated with survival after surgery for pT2 GB carcinoma. The 5-year survival in 14 patients with well-differentiated adenocarcinoma was 92%, in contrast to the 42% 5-year survival in 6 patients with moderately or poorly-differentiated adenocarcinoma. There was no 5-year survivor among the four patients with perineural invasion, and the 5-year survival rate in 16 patients without perineural invasion was 86%, with a median survival of 72 months (Fig. 2). As regards the relationship between the histological differentiation grade and perineural invasion, three of six moderately or poorly differentiated tumors showed perineural invasion, whereas only 1 of 14 well-differentiated tumors had perineural invasion ( $p = .06$ ). The presence of perineural invasion was closely related to the tumor location extending to the neck or the cystic duct ( $p < 0.05$ ).

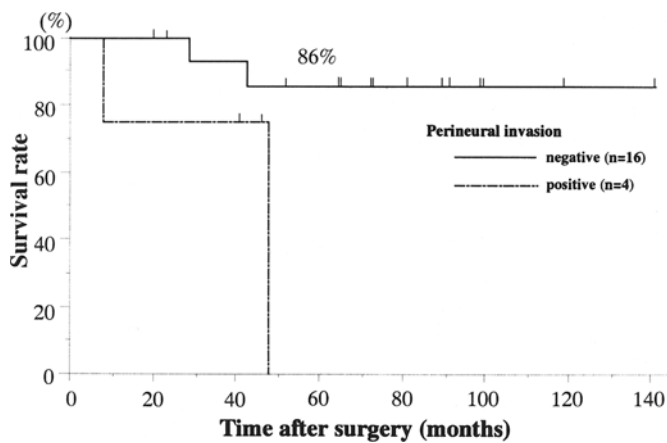
## Discussion

Because of its nonspecific clinical features and symptoms, most cases of GB carcinoma are still diagnosed at the advanced stage. Having knowledge of the modes of GB carcinoma spread makes

**Table 3.** Prognostic determinants of patients with pT2 gallbladder carcinoma.

Variable	No. of patients	5-year survival rate (%)	P value
Gender			
Male	5	75	0.9622
Female	15	77	
Timing of radical operation			
Simultaneous with cholecystectomy	12	82	0.9534
Second operation	8	75	
Extrahepatic bile duct			
Removed	12	64	0.1049
Preserved	8	100	
Location of gallbladder carcinoma			
Fundus and/or body	12	90	0.1062
Neck	8	56	
Type of tumor growth			
Expanding	9	88	0.0558
Intermediate	8	88	
Infiltrating growth	3	0	
Pathologic type			
Well differentiated	14	92	0.0319
Not well differentiated	6	42	
pN classification			
pN0	16	79	0.3925
pN1	4	75	
Overt nodal metastasis and/or micrometastasis			
Absent	15	78	0.7066
Present	5	80	
Lymphatic vessel invasion			
Absent	8	86	0.4039
Present	12	72	
Microscopic venous invasion			
Absent	13	81	0.4871
Present	7	69	
Perineural invasion			
Absent	16	86	0.0439
Present	4	0	

radical resection more feasible with the advances in surgical techniques [4, 5, 8, 15–18]. The T category in TNM classification applied for GB carcinoma is determined by the depth of cancer invasion, which is the most reliable factor associated with prognosis after surgery [5, 17, 19]. The extent of resection for each stage of GB carcinoma is controversial. Most surgeons agree that T1 disease does not require any surgery other than a simple cholecystectomy because no lymph node metastasis is evident [10, 20]. Surgical management has been proposed for pT2 GB carcinoma by some



**Fig. 2.** Actuarial survival of patients with pT2 gallbladder carcinoma after surgery according to the presence of perineural invasion.  $p < 0.05$  by the log-rank test.

investigators [5, 15, 21]. In patients treated with a simple cholecystectomy alone, postoperative survival remains pessimistic with 0% to 40% 5-year survival rates [2, 9, 22, 23]. We demonstrated that radical surgery consisting of a partial hepatectomy and regional lymphadenectomy with or without resection of the extrahepatic bile duct yielded a 77% 5-year survival for patients with pT2 GB carcinoma. Surgeons with a similar policy for treatment of pT2 GB carcinoma have reported 50% to 86% 5-year survival rates [5, 14, 15, 21, 24].

Because the cancer-free surgical margin had an effect on patient survival in pT2 GB carcinoma [21], hepatic resection of segments 4b and 5 was performed as a standard hepatectomy in this series. As a consequence, metastatic disease in the remnant liver occurred in only one patient. Hepatic metastasis from GB carcinoma is encountered frequently, but only a few reports are available on its metastatic routes [25, 26]. We previously indicated that direct hepatic involvement may be an important route via the portal tract in advanced cases of pT3 and pT4 GB carcinoma [4]. This type of hepatic metastasis was designated as angiolymphatic spread and microscopically presents with nests of GB carcinoma within the portal tracts in the liver, adjacent to the primary tumor [25]. This mode of hepatic metastasis is not always accompanied by direct invasion of the liver through the GB bed as seen in one patient in our series. Hepatic resection of segments 4b and 5 may be a better choice of hepatectomy to remove occult localized hepatic metastasis around the GB bed and to obtain the chance of cure in patients with pT2 GB carcinoma.

The frequency of lymph node metastasis is remarkably increased when GB carcinoma extends to the subserosal layer [15]. Lymph node metastasis has been seen in 25% to 62% of reported patients undergoing pT2 GB carcinoma resection [15, 20, 24, 27–29]. A large percentage of these metastatic sites were included in the pN1 regional lymph nodes, although metastasis to the paraaortic lymph nodes was seen in 8% to 14% of patients in two series alone [15, 27]. Chijiwa and associates [21] attached high importance to the presence of lymph node metastasis as a poor prognostic factor in pT2 GB carcinoma. In contrast, the 5-year survival rate in five patients with lymph node metastasis was 80% in our series. This result supports the notion that the incorporation of systematic lymph node dissection in our resectional procedure is beneficial. Shimada and associates [15] also indicated that the 5-year survival in 11 patients

with pN0 and pN1 was 85%, but there were no 5-year survivors among patients with paraaortic lymph node metastasis. From these observations, systematic lymph nodes, including regional lymph nodes in the hepatoduodenal ligament, along the common hepatic and celiac arteries and on the pancreatic head, should be dissected in surgery for pT2 GB carcinoma.

In recent studies, the prognostic relevance of micrometastases in the lymph nodes has been determined in GB carcinoma [14, 30]. The immunohistochemical detection of lymph node micrometastases was reported to be useful in predicting survival in patients undergoing radical resection for GB carcinomas [14, 30]. However, it remains unresolved whether the identification of lymph node micrometastases is of clinical significance, irrespective of the tumor staging. Our study showed that the presence of immunohistochemically detected micrometastases in the lymph nodes of patients with pT2 GB carcinoma was limited to the N1 regional lymph nodes and did not affect their prognosis. Even if the presence of lymph node metastasis was not detected with routine histology, nodal micrometastasis beyond the field of the regional lymph nodes is thought to be unusual in pT2 GB carcinoma.

The perineural space is a lymphatic channel and a major pathway for lymph node metastasis. Bhuiya and colleagues [31] demonstrated that perineural invasion has a profound impact on survival in the analysis of hilar cholangiocarcinoma. We [32] and Chijiwa et al. [33] demonstrated that the presence of periductal infiltration was significantly associated with a poor prognosis after the surgical resection of intrahepatic cholangiocarcinoma. Thus, perineural invasion as well as lymph node metastases may explain the aggressive invasive behavior of hepatobiliary malignancies. The prognosis after radical surgery for pT2 GB carcinoma was affected by perineural invasion, although the sample size was limited in this series. Considering that cancer readily spreads through the perineural space, dissection of the nerve fibers and plexuses around the hepatic and celiac arteries and portal vein should be performed in a systematic regional lymphadenectomy for patients with pT2 GB carcinoma. In particular, a close relationship between the presence of perineural invasion and the tumor location extending to the neck or the cystic duct would support the necessity of resecting the extrahepatic bile duct for pT2 GB carcinoma in this region.

It is controversial whether the extrahepatic bile duct should be routinely resected in the radical dissection of pT2 GB carcinoma [5, 15, 21, 28]. No improvement in long-term survival has been reported as the result of resecting the extrahepatic bile duct [28, 29]. Kosuge and associates [28] indicated that preserving the extrahepatic bile duct is recommended in radical surgery for GB carcinoma when the tumor is less advanced than stage IV and does not extend to the hepatoduodenal ligament. Carcinomas in the neck of the GB and/or cystic duct frequently involve the common bile duct through intraductal extension or external invasion to the hepatoduodenal ligament, relative to those limited to the GB fundus and/or body [5]. We preserved the extrahepatic bile duct in eight patients with pT2 GB carcinoma limited to the GB fundus and/or body, and those eight patients have survived for a median of 64 months without recurrent disease. Consistent with the opinion of Bartlett and associates, we propose that preserving the extrahepatic bile duct is desirable in the treatment of pT2 GB carcinoma limited to the GB fundus and/or body.

Histologic examination of a frozen section of a suspicious GB lesion is indispensable to prevent overlooking cancerous tissue, but this diagnostic modality is not available in all surgical institutes.

Fong et al. [24] reported that patients with radiographically resectable pT2 GB carcinoma who were not subjected to a radical second operation after a simple cholecystectomy had a 5-year survival rate of 19%. In our series, a radical second operation yielded a 5-year survival rate of 75%. The goal of the radical second operation is the clearance of residual tumor in the GB bed, the cystic duct stump, and regional lymph nodes. Indeed, the presence of residual tumors was histologically shown in three specimens resected by radical second operations, and two of these three patients have obtained a complete cure beyond 5 years (Table 2). Recurrent disease occurred in two of eight patients undergoing radical second operations. One patient underwent a radical second operation 5 months after open cholecystectomy and another had a radical second operation 1 month after laparoscopic cholecystectomy. The latter had local recurrence along Glisson's sheath, but there was no cancer at the cut stump of the common hepatic duct and there were no lymph node metastases or perineural invasion at the radical second operation.

Sufficient information is not available on appropriate timing of radical second operation after cholecystectomy for pT2 GB carcinoma. The time elapsed after cholecystectomy is crucial for the risk of intraabdominal tumor spread. Wise and associates [23] reported that five patients undergoing radical second operations within 3 months after the diagnosis of pT2 GB carcinoma were alive without recurrence for 15 to 83 months after radical resection. The presence of residual tumor tissue is not evident until a radical second operation is performed in patients with pT2 GB carcinoma. Even for patients with residual tumor, a chance of cure would be provided, as shown in our series, if radical second operation is performed without delay. Judging from the curability rate in our series, radical second operations should be performed within 2 months after cholecystectomy.

It is controversial whether excision of port sites is indispensable for patients at the radical second operation for pT2 GB carcinoma diagnosed after LC [34, 35]. The incidence of port site/peritoneal recurrence after LC is unexpectedly high, ranging from 11% to 19% [34–37]. Port site recurrence is closely related to GB perforation during LC for patients with GB carcinoma [35]. Wakai and colleagues [36] indicated that GB perforation during LC was associated with poor survival in radical second operation for patients with pT2 GB carcinoma. Port sites should be excised at the time of radical second operation if spillage of tumor-laden bile occurred during LC. A further important point is that LC should be avoided if pT2 GB carcinoma is suspected preoperatively because of the risk of inadvertent tumor spillage and seeding during laparoscopic manipulation [7].

In conclusion, hepatic resection of segments 4b and 5 with a cholecystectomy and regional lymphadenectomy, including the lymph nodes in the hepatoduodenal ligament, along the common hepatic and celiac arteries, and on the pancreatic head, was appropriate as a standard radical operation for pT2 GB carcinoma. Resection of the extrahepatic bile duct is indicated for patients with pT2 GB carcinoma located in the neck and/or cystic duct. Radical second operations offer a chance of cure for patients with pT2 GB carcinoma diagnosed after cholecystectomy.

**Résumé.** Cette étude rétrospective évalue les procédés chirurgicaux dans le traitement des cancers de la vésicule biliaire pT2. Vingt patients porteurs de tumeur de la vésicule biliaire pT2 ont eu une résection chirurgicale. L'hépatectomie des segments 4b et 5 a été réalisée chez 19 patients et une lobectomie droite étendue chez un. La voie biliaire extrahépatique a pu être

préservée chez huit patients lorsque la maladie était limitée au fundus et/ou au corps de la vésicule. Une lymphadénectomie régionale a été réalisée chez 18 patients. Une intervention radicale a été réalisée chez huit patients à distance de leur cholécystectomie initiale. Le staging anatomopathologique final a été stade « IB » chez 15 patients, stade « IIB » chez quatre, et stade « IV » chez un. Le taux de survie globale à 5 ans chez les 20 patients a été de 77%, sans aucune mortalité opératoire. Les taux de survie à 5 ans chez les cinq patients porteurs de métastases ganglionnaires et chez les huit patients sans résection extrahépatique, ont été, respectivement, de 80% et de 100%. En cas de deuxième intervention radicale, à distance, chez huit patients s'est soldée par une survie à 5 ans de 75%. L'envahissement périspinal a été le facteur pronostique déterminant pour les tumeurs s'étendant au col vésiculaire et au canal cystique. L'hépatectomie partielle avec résection extrahépatique et une lymphadénectomie régionale ont été considérées comme l'intervention standard radicale en cas de tumeur pT2 mais la préservation de la voie biliaire extra-hépatique est conseillée en cas de cancer limité au fundus et/ou corps. L'intervention à distance radicale augmente les chances de cure chez le patient porteur de cancer pT2 de la vésicule biliaire.

**Resumen.** Se efectúa un estudio retrospectivo para averiguar el tratamiento quirúrgico realizado en carcinomas pT2 de vesícula biliar (GB). 20 pacientes con carcinomas pT2 de vesícula biliar (GB) fueron tratados quirúrgicamente. En 19 pacientes se efectuaron hepatectomías de los segmentos 4b y 5 y en 1 una lobectomía hepática derecha ampliada. La vía biliar extrahepática se conservó en 8 pacientes en los que la lesión estaba localizada, exclusivamente, en el fundus o cuerpo de la vesícula biliar. Linfadenectomía regional se realizó en 18 casos. Fueron reintervenidos con criterios más radicales 8 pacientes tras sufrir una colecistectomía previa. La estadificación registrada fue la siguiente: estadio IB (n = 15) IIB (n = 4) y IV (n = 1). En los 20 pacientes la supervivencia global a los 5 años fue del 77%, sin mortalidad intraoperatoria alguna. La tasa de supervivencia a los 5 años en 5 pacientes con nódulos metastásicos y 8 sin resección biliar extrahepática fue del 80% y 100%. Una segunda operación más radical en 8 pacientes proporcionó una tasa de supervivencia a los 5 años del 75%. Un factor pronóstico determinante fue la invasión perineural que se asociaba a la extensión del tumor hacia el cuello o al conducto cístico. La hepatectomía parcial generalmente acompañada de resección de la vía biliar extrahepática y linfadenectomía regional parece constituir la técnica quirúrgica estándar para los carcinomas pT2 de vesícula biliar, pero en los cánceres limitados al fundus y cuerpo de la vesícula se puede respetar la vía biliar extrahepática. Una segunda operación más radical, aumenta la posibilidad de curación en pacientes con carcinomas pT2 de vesícula biliar.

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